

FORM PTO-1390 (Modified)  
(REV 11-2000)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES  
DESIGNATED/ELECTED OFFICE (DO/EO/US)  
CONCERNING A FILING UNDER 35 U.S.C. 371**

428.1007

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

**09/914964**

INTERNATIONAL APPLICATION NO.

**PCT/KR00/00177**

INTERNATIONAL FILING DATE

**7 March 2000**

PRIORITY DATE CLAIMED

**9 March 1999**

TITLE OF INVENTION

**A VITAL MATTER AND A PRODUCING METHOD**

APPLICANT(S) FOR DO/EO/US

**SONG, Si-Hoon**

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
  - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☒ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
  - a. ☐ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
10. ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A copy of the International Search Report (PCT/ISA/210).

**Items 13 to 20 below concern document(s) or information included:**

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☒ Certificate of Mailing by Express Mail
23. ☒ Other items or information:

**Acknowledgement postcard****Unexecuted Declaration (2 pages)**

U.S. APPLICATION NO. (IF KNOWN) SEE 37 CFR

INTERNATIONAL APPLICATION NO.

ATTORNEY'S DOCKET NUMBER

037/914964

PCT/KR00/00177

428.1007

24. The following fees are submitted.:

**BASIC NATIONAL FEE ( 37 CFR 1.492 (a) (1) - (5) ) :**

- ☒ Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO ..... **\$1000.00**
- ☐ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... **\$860.00**
- ☐ International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... **\$710.00**
- ☐ International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... **\$690.00**
- ☐ International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) ..... **\$100.00**

**ENTER APPROPRIATE BASIC FEE AMOUNT =****\$1,000.00**

Surcharge of **\$130.00** for furnishing the oath or declaration later than ☐ 20 ☒ 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).

**\$130.00**

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total claims	5 - 20 =	0	x \$18.00
Independent claims	2 - 3 =	0	x \$80.00

**\$0.00****\$0.00**Multiple Dependent Claims (check if applicable). ☐**\$0.00****TOTAL OF ABOVE CALCULATIONS =****\$1,130.00**

- ☒ Applicant claims small entity status. (See 37 CFR 1.27). The fees indicated above are reduced by 1/2.

**\$565.00****SUBTOTAL =****\$565.00**

Processing fee of **\$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (f)).

**\$0.00****TOTAL NATIONAL FEE =****\$565.00**

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). ☐

**\$0.00****TOTAL FEES ENCLOSED =****\$565.00**Amount to be:  
refunded

\$

charged

\$

- a. ☐ A check in the amount of \_\_\_\_\_ to cover the above fees is enclosed.
- b. ☒ Please charge my Deposit Account No. **50-0217** in the amount of **\$565.00** to cover the above fees. A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **50-0217**. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. **Credit card information should not be included on this form.** Provide credit card information and authorization on PTO-2038.

**NOTE:** Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

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**022856**

PATENT TRADEMARK OFFICE

SIGNATURE

Michael N. Mercanti

NAME

33,966

REGISTRATION NUMBER

September 6, 2001

DATE

428.1007

**UNITED STATES PATENT & TRADEMARK OFFICE**

Re: Application of: SONG, Si-Hoon  
Serial No.: To be assigned  
Filed: Herewith  
For: **A VITAL MATTER AND A PRODUCING METHOD**  
Group Art Unit: Unknown  
Examiner: Unknown  
Docket No.: 428.1007

**PRELIMINARY AMENDMENT**

Assistant Commissioner  
for Patents  
Washington, D.C. 20231

September 6, 2001

Sir:

Prior to the examination, please amend the above-identified patent application as follows:

**IN THE SPECIFICATION:**

**Page 1, before line 1, please insert the following paragraph:**

--This patent application claims a benefit of priority from Korean Patent Application No. 1999-0007707 filed March 9, 1999 through PCT Application Serial No. PCT/KR00/00177, the contents of each of which are incorporated herein by reference.--.

**IN THE CLAIMS:**

**Please amend claim 1 as follows:**

1. (Amended) A vital matter prepared by the process comprising the steps: 1) preparing a composition containing kaoline (white soil) 30.0-40.0 wt%, potassium sulfate 15.0-20.0 wt%, sodium sulfate 13.0-17.0 wt%, feldspar 12.0-16.0 wt%, talc 12.0-16.0 % and ferric oxide 0.5-1.5 wt%; 2) mixing the above-mentioned composition using a compressed molding method; and 3) heating the mixed composition at 1000-1300°C.

**Please cancel claim 2.**

**Please amend claim 3 as follows:**

3. (Amended) The vital matter prepared according to claim 1, further comprising potassium 19.06-23.29 wt%, calcium 14.21-17.36 wt%, sodium 12.30-14.97 wt%, magnesium 11.98-14.64 wt%, silicon 13.74-16.80 wt%, aluminum 12.21-15.13 wt%, iron 3.48-4.26 wt%, titanium 0.95-1.17 wt%, manganese 0.28-0.40 wt%, zinc 0.17-0.20 wt%, germanium 0.07-0.09 wt%, selenium 0.03-0.04 wt% and other elements 1.36-1.67 wt%.

**Please amend claim 4 as follows:**

4. (Amended) The vital matter according to claim 1, further comprising a synthetic resin in the form of a minute powder ranging from 200-350 mesh.

**Please add new claim 5:**

- 5. (New) A method of preparing vital matter comprising the steps: 1) preparing a composition containing kaoline (white soil) 30.0-40.0 wt%, potassium sulfate 15.0-20.0 wt%, sodium sulfate 13.0-17.0 wt%, feldspar 12.0-16.0 wt%, talc 12.0-16.0 % and ferric oxide 0.5-1.5 wt%; 2) mixing the above-mentioned composition using a compressed molding method; and 3) heating the mixed composition at 1000-1300°C. --.

**Please add new claim 6:**

- 6. (New) A method of preparing vital matter according to claim 5, wherein said heating is carried out for a time period of 2 to 3 hours. --.

#### **REMARKS**

This preliminary amendment is being submitted to insert a claim of priority based on a foreign application into the specification.

This amendment is also being submitted to correct minor typographical errors in the claims and conform the claim language to U.S. standards. It is respectfully submitted that no new matter has been entered and that the present application is in all respects complete and in condition for favorable consideration.


Attached hereto is a marked-up version of the changes made to the claims by the preliminary amendment. The attached appendix is captioned "Version with markings to show changes made."

If the Examiner has any questions regarding the amendment presented herein, it is requested that the Examiner contact the undersigned at the telephone number shown below.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

ROBERTS & MERCANTI, L.L.P.

  
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"Express Mail" mailing label no. EL 869 002 396 US  
Date of Deposit September 6, 2001  
I hereby certify that this correspondence and/or fee  
is being deposited with the United States Postal Service  
"Express Mail Post Office to Addressee" service under 37  
CFR 1.10 on the date indicated above, in an envelope  
addressed to: "Assistant Commissioner for Patents,  
Washington, DC 20231".

ROBERTS & MERCANTI, L.L.P.

By:   
Michael N. Mercanti

A vital matter and a producing method

FIELD OF THE INVENTION

5 The present invention relates to a vital matter of human body, animals and plants promoting their growth and increasing preservative capability of animals and plants.

10 The present invention also relates to a producing method of the vital matter composed of natural substances and compounds by mixing at almost the same ratio as that of inorganic substances in human, animals and plants.

15 The producing method of the present invention may be used in the whole field of industries such as building materials, things of life, a medical industry and a food industry.

BACKGROUND

20 Natural substances such as yellow soil and silicon dioxide mineral, and synthetic ceramic have been used in the whole field of industries such as medical instruments using infrared-ray and things of life.

25 However, since the above-mentioned things is prepared by using the natural substances such as yellow soil and white soil as major components, content of a silicate ( $\text{SiO}_2$ ) is high, whereas contents of inorganic substances such as potassium, calcium, sodium, magnesium and iron are very low. Thus, it is impossible to accomplish sympathy of

energy and native wavelength between conventional substances and human body, animals and plants.

#### SUMMARY OF THE INVENTION

5 It is an object of this invention to provide a vital matter activating original active rhythm of human body, animals and plants at a maximum level.

It is a further object of this invention to provide a producing method the vital matter.

#### DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

10 Since the vital matter of the present invention has a similar composition to a major inorganic substance of human body, animals and plants, the vital matter induces a resonance phenomenon by approaching to human body, animals and plants, so that sympathy of energy and native wavelength between it and animals or plants is maximized.

15 In detail, when five or six bronze bells made from the same materials are hang and one of them rings, others ring with the same sound, which is a resonance phenomenon. The resonance phenomenon also occurs when drums or bowls made from the same materials are used for the above experiment. However, the resonance phenomenon does not occur if a drum or a bowl rings and vice versa. Therefore, it is demonstrated that things made from the same materials induce sympathy of energy and native wavelength.

Otherwise, potassium, calcium, sodium, magnesium and iron are major components of inorganic substances of human body, animals and plants. Thus, the composition of the present invention is prepared by mixing various components at almost the same ratio as that of inorganic components of animals and plants. Sympathy of energy and native wavelength between the composition of the present invention and human body, animals and plants, is maximized to activate active rhythm of human body, animals and plants at maximal level.

The composition of the present invention contains kaoline(white soil) 30.0-40.0wt%, potassium sulfate 15.0-20.0wt%, sodium sulfate 13.0-17.0wt%, feldspar 12.0-16.0wt%, talc 12.0-16.0% and ferric oxide 0.5-1.5wt%. The composition is mixed by a compressed molding method with water, dried and manufactured in random forms. The resulting composition becomes plastic at 1000-1300°C for its use in various forms.

The vital matter of the present invention prepared by the above-mentioned composition has components shown in the following Table 1.

<Table 1> Average ratio of components of composition

Components	Weight ratio(wt%)
Potassium(K)	19.06-23.29wt%
Calcium(Ca)	14.21-17.36wt%
Sodium(Na)	12.30-14.97wt%



Magnesium(Mg)	11.98-14.64wt%
Silicon(Si)	13.74-16.80wt%
Aluminum(Al)	12.21-15.13wt%
Iron(Fe)	3.48-4.26wt%
Titanium(Ti)	0.95-1.17wt%
Manganese(Mn)	0.28-0.40wt%
Zinc(Zn)	0.17-0.20wt%
Germanium(Ge)	0.07-0.09wt%
Selenium(Se)	0.03-0.04wt%
Other elements	1.36-1.67wt%

The major components of the composition of the present invention are potassium, calcium, sodium and magnesium, which is similar distribution with inorganic substances of human body, animals and plants. In addition, the composition of the present invention has an affinity for silicon and aluminium abundantly contained in soil.

Whereas, as shown in Table 2, general ceramic products contain large amounts of silicon and aluminium, and small amounts of potassium, calcium, sodium and magnesium.

<Table 2> Average ratio of components of general ceramic products

Components	Weight ratio(wt%)
Aluminium(Al)	35.36-43.22wt%
Silicon(Si)	31.33-38.30wt%
Potassium(K)	7.73-9.45wt%
Magnesium(Mg)	3.56-4.36wt%
Iron(Fe)	3.52-4.31wt%
Calcium(Ca)	3.40-4.16wt%
Sodium(Na)	2.79-3.63wt%
Titanium(Ti)	0.03-0.04wt%
Other elements	2.10-2.57wt%

The ratio of components of general yellow soil ceramic is shown in Table 3.

5 <Table 3> Average ratio of components of general yellow soil ceramic

Components	Weight ratio(wt%)
Silicon dioxide( $\text{SiO}_2$ )	64.08-79.42wt%
Aluminium oxide( $\text{Al}_2\text{O}_3$ )	9.45-11.55wt%
Sodium oxide( $\text{Na}_2\text{O}$ )	3.32-4.02wt%
Ferric oxide( $\text{Fe}_2\text{O}_3$ )	2.93-3.58wt%
Potassium oxide( $\text{K}_2\text{O}$ )	2.22-2.71wt%
Other elements	8.02-9.80wt%

10 As shown in Table 3, the general yellow soil ceramic contains mostly silicon and aluminium as major components, and small amounts of potassium, calcium, sodium and magnesium which are associated with human body, animals and plants. Thus, Sympathy of energy and native wavelength between the general yellow soil ceramic and human body,  
15 animals and plants, does not occur.

Hereinafter, the present invention is described in detail.

20

#### EXAMPLES

Practical and presently preferred embodiments of the present invention are illustrative as shown in the following Examples.

However, it will be appreciated that those skilled in the art, on consideration of this disclosure, may make modifications and improvements within the spirit and scope of the present invention.

5

**Example 1: Preparation of the vital matter**

10 The composition of the present invention contains the following components: i) Kaoline (white soil) 30-40wt%; ii) potassium sulfate 15.0-20.0wt%; iii) sodium sulfate 13.0-17.0wt%; iv) feldspar 12.0-16.0wt%; v) talc 12.0-16.0%; and vi) ferric oxide 0.5-1.5wt%.

15 In the above composition, potassium sulfate and sodium sulfate may be replaced by the same amounts of potassium chloride and sodium chloride ions. However, because a moisture drying efficiency of sulfate salts are better than that of chloride salts, the present inventors selected potassium sulfate and sodium sulfate to increase the moisture drying efficiency.

20 The composition was manufactured in form of minute powder of 100-150 mesh. After the composition was mixed by the compressed molding method or with 20-30wt% of water to mold in the fixed form, it was dried by hot wind at 40-80°C for 10-15 hours and heated 1000-1300°C for 2-3 hours to be plastic.

25 The manufactured composition was prepared in various form to be used for various industry.

The composition of the present invention activated

active rhythm of human body, animals and plants at a maximum level by inducing sympathy of energy and native wavelength between it and human body, animals and plants. In addition, this activation by the composition of the present invention was superior to that by conventional ceramic products.

Generally, infrared-ray irradiation of silicon is higher than that of potassium. Whereas, the composition of the present invention was excellent in bioaffinity and sympathy of energy and native wavelength between it and human body, animals and plants.

**Experiment 1: Physiological reactivity of the composition of the present invention and general ceramic products**

The present inventors performed the physiological reactivity experiment of the composition and general ceramic products, and compared their physiological reactivities. The result was shown in Table 4.

<Table 4> The results of comparing the physiological reactivity.

Item	Refinement velocity of coffee taste	Refinement velocity of tobacco	deodorization of Refrigerator	Freshness of vegetables
Yellow ceramic	10 hours* (3 hours)	10 hours* (3 hours)	No effect	No effect
Medical ceramic	10 min* (20 sec)	5 min* (5 sec)	From 2 hours after starting	180% increase
Industrial ceramic	5 hours* (1 hour)	1 hour* (30 min)	From 5 hours after starting	130% increase

The composition of the present invention	30 sec* (10 sec)	20 sec* (2 sec)	From 30 min after starting	250% increase
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<\*:the experiment was performed at room temperature, ( ):

the experiment was performed at 50°C

The composition of the present invention was superior to the conventional ceramic products in acting velocity and efficiency of refinement toward advantages of living body.

In addition, the composition was prepared in form of minute powder of 200-350 mesh and mixed with synthetic resin to the concentration of 5-30%. The resulting mixture can be used in various forms for industry.

For example, after the composition of the present invention was added to polyethylene film which has been used a vinyl house for cultivating plants, the present inventors cultivated the crops using the vinyl house made from the ployethylene film containing the composition of the present invention and the vinyl house made from general polyethylene film. The results was shown in Table 5.

<Table 5> The results of cultivating the crops

crop	Average yield		
	Polyethylene film	Polyethylene film containing the component	Comparison (increasing ratio)
Chinese cabbage	416 kg	499 kg	20% increase
Cucumber	422 kg	527 kg	25% increase
Tomato	575 kg	719 kg	25% increase
Red	179 kg	250 kg	40% increase

pepper			
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(increase per 100 m<sup>2</sup> of cultivation areas)

As shown in Table 5, when the synthetic resin containing the composition of the present invention was used, the yield of the crops was increased more about 20-40% than that when the general synthetic resin was used. Therefore, these results demonstrate that the composition of the present invention accelerates physiological activity of plants.

#### INDUSTRIAL APPLICABILITY

The composition of the present invention, a vital matter of human body, animals and plants, can maximize sympathy of an activation energy and a native wavelength between it and human body, animals and plants. Thus, the composition of the present invention can be used for industry and will cause the original changes in the field of industrial matters.

In detail, for example, the composition of the present invention can be used all the industries including building materials and raw materials of various synthetic resins (especially, vinyl, plastic, etc.), various food containers, cosmetics and cosmetics containers, various medical instruments (especially, medical instruments using far infrared-ray), medicines and medicines containers,

containers for cultivating various plants, deodorants and chemical products such as agricultural chemicals. Therefore, it is expected that the composition of the present invention, the vital matter of human body, animals  
5 and plants, will promote the welfare of human beings such as improvement of health and life of human.

Those skilled in the art will appreciate that the conceptions and specific embodiments disclosed in the foregoing description may be readily utilized as a basis  
10 for modifying or designing other embodiments for carrying out the same purposes of the present invention. Those skilled in the art will also appreciate that such equivalent embodiments do not depart from the spirit and  
15 scope of the invention as set forth in the appended claims.

## What is Claimed is

1. A vital matter and a producing method thereof, wherein the vital matter is prepared by the following steps: 1) preparing a composition containing kaoline (white soil) 30.0-40.0wt%, potassium sulfate 15.0-20.0wt%, sodium sulfate 13.0-17.0wt%, feldspar 12.0-16.0wt%, talc 12.0-16.0% and ferric oxide 0.5-1.5wt% (step 1); and 2) mixing the above-mentioned composition using a compressed molding method (step 2); and 3) heating the mixed composition at 1000-1300°C (step3).

2. The vital matter and the producing method thereof according to claim 1, wherein potassium sulfate and sodium sulfate are replaced by the same ratio of each molecular weight of sodium chloride and sodium chloride.

3. The vital matter and the producing method thereof according to claim 1, wherein the vital matter is composed of potassium 19.06-23.29wt%, calcium 14.21-17.36wt%, sodium 12.30-14.97wt%, magnesium 11.98-14.64wt%, silicon 13.74-16.80wt%, aluminium 12.21-15.13wt%, iron 3.48-4.26wt%, titanium 0.95-1.17wt%, manganese 0.28-0.40wt%, zinc 0.17-0.20wt%, germanium 0.07-0.09wt%, selenium 0.03-0.04wt% and other elements 1.36-1.67wt%.

4. The vital matter and the producing method thereof



according to claim 1, wherein a composition of the vital matter is used in combination with synthetic resins after prepared in form of minute powder of 200-350 mesh.

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (10-03)

Approved for use through 10/31/2002. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)</b>  <input type="checkbox"/> Declaration Submitted with Initial Filing      OR <input checked="" type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(e)) required)	<b>Attorney Docket Number</b>	428.1007
	<b>First Named Inventor</b>	SONG, Si-Hoon
	<b>COMPLETE IF KNOWN</b>	
	<b>Application Number</b>	09 / 914,964
	<b>Filing Date</b>	09/06/2001
	<b>Group Art Unit</b>	
	<b>Examiner Name</b>	

As a below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

A Vital Matter and A Producing Method

the specification of which

(Title of the Invention)

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) 09/06/2001 as United States Application Number or PCT International

Application Number 09/914,964 and was amended on (MM/DD/YYYY) 09/06/2001 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above:

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application		Foreign Filing Date	Priority	Certified Copy Attached?	
				YES	NO
No. 1999-0007707 PCT/KR/00/00177	Republic of Korea PCT	03/09/1999 03/07/2000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]


Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (10-00)  
Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

## DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input checked="" type="checkbox"/> Customer Number or Bar Code Label		022856		OR <input type="checkbox"/> Correspondence address below	
					
Name					
022856					
Address					
PATENT TRADEMARK OFFICE					
Address					
City		State		ZIP	
Country		Telephone		Fax	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.					
NAME OF SOLE OR FIRST INVENTOR :				<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any]) Si-Hoon				Family Name or Surname SONG	
Inventor's Signature <i>Song Si Hoon</i>				Date <i>Sept. 10, 2001</i>	
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NAME OF SECOND INVENTOR:				<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])				Family Name or Surname	
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Citizenship					
Mailing Address					
Mailing Address					
City		State		ZIP	
Country					
<input type="checkbox"/> Additional inventors are being named on _____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.					

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**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(b))—INDEPENDENT INVENTOR**

Docket Number (Optional)  
428.1007

Applicant, Patentee, or Identifier: SONG, Si-Hoon

Application or Patent No.: Unknown

Filed or Issued: Herewith

Title: A VITAL MATTER AND A PRODUCING METHOD

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.  
☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

SONG, Si-Hoon

NAME OF INVENTOR

Song Si Hoon  
Signature of inventor

NAME OF INVENTOR

Signature of inventor

NAME OF INVENTOR

Signature of inventor

August 10, 2001  
Date

Date

Date